

WHAT IS CLAIMED IS:

1. A liquid crystal display device, comprising:
- 5 a first substrate;
- a plurality of gate lines formed on said first substrate;
- a plurality of data lines, electrically insulated from said plurality of gate line, formed on said first substrate such that said plurality of data lines intersect with said plurality of gate lines to define cell areas;
- 10 a pixel electrode formed in each of said cell areas;
- a transistor associated with each pixel electrode, said transistor having a gate, source and drain, said drain connected to said pixel electrode, said source connected to one of said plurality of data lines, and said gate connected to one of said
- 15 plurality of gate lines;
- barrier ribs formed on said source and drain of each transistor; and
- an ink-jet color filter formed in each cell area between said barrier ribs.
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2. The liquid crystal display device of claim 1, wherein said barrier ribs are a photo-resist pattern.
3. The liquid crystal display device of claim 1, wherein
- 25 at least one of said barrier ribs formed on one of said drains has a contact hole formed therein to expose said drain; and
- said pixel electrode associated with said transistor having said exposed drain is connected to said exposed drain via said contact hole.
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4. The liquid crystal display device of claim 1, wherein said

barrier ribs prevent light from leaking there through.

5. The liquid crystal display device of claim 1, further comprising:

5 a protective layer formed in a portion of each cell area; and wherein

a portion of said ink-jet color filter formed in each cell area is formed on said protective layer.

10 6. The liquid crystal display device of claim 1, wherein said pixel electrode in each cell area is formed on said ink-jet color filter in said cell area.

15 7. The liquid crystal display device of claim 1, wherein said barrier ribs have a stripe-shape in a direction parallel to said plurality of data lines.

20 8. The liquid crystal display device of claim 7, wherein said barrier ribs adjacent to one another and associated with different transistors define a column area, said column area including a plurality cell areas; and each ink-jet color area formed in one of said column areas.

25 9. The liquid crystal display device of claim 1, further comprising:

a second substrate opposed to said first substrate; and liquid crystal disposed between said first and second substrates.

30 10. A liquid crystal display device, comprising:  
a first substrate;

barrier lines formed in a first direction over said first substrate, adjacent barrier lines defining a column area;  
an ink-jet color filter formed in at least one of said column areas.

5 11. The liquid crystal display device of claim 10, wherein said barrier lines are a photo-resist pattern.

12. The liquid crystal display device of claim 10, wherein said barrier lines prevent light from leaking there through.

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13. The liquid crystal display device of claim 10, further comprising:

a plurality of gate lines formed on said first substrate;  
a plurality of data lines, electrically insulated from said  
15 plurality of gate line, formed on said second substrate such that said plurality of data lines intersect with said plurality of gate lines to define cell areas;

a pixel electrode formed in each of said cell areas; and  
a transistor associated with each pixel electrode, said  
20 transistor having a gate, source and drain, said drain connected to said pixel electrode, said source connected to one of said plurality of data lines, and said gate connected to one of said plurality of gate lines.

25 14. The liquid crystal display device of claim 13, wherein said barrier lines are formed parallel to said plurality of data lines.

15. The liquid crystal display device of claim 13, wherein  
30 said barrier lines are formed on said sources and drains of said transistors.

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16. The liquid crystal display device of claim 14, wherein  
at least one of said barrier lines formed on one of said drains  
has a contact hole formed therein to expose said drain; and

5       said pixel electrode associated with said transistor having  
said exposed drain is connected to said exposed drain via said  
contact hole.

17. The liquid crystal display device of claim 14, further  
10 comprising:

a protective layer formed in a portion of each cell area; and  
wherein

a portion of said ink-jet color filter formed in each cell  
area is formed on said protective layer.

15       18. The liquid crystal display device of claim 14, wherein  
said pixel electrode in each cell area is formed on said ink-jet  
color filter in said cell area.

19. The liquid crystal display device of claim 10, further  
20 comprising:

a second substrate opposed to said first substrate;

a plurality of gate lines formed on said second substrate;

a plurality of data lines, electrically insulated from said  
25 plurality of gate line, formed on said second substrate such that  
said plurality of data lines intersect with said plurality of gate  
lines to define cell areas;

a pixel electrode formed in each of said cell areas; and

a transistor associated with each pixel electrode, said  
30 transistor having a gate, source and drain, said drain connected  
to said pixel electrode, said source connected to one of said

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plurality of data lines, and said gate connected to one of said plurality of gate lines.

20. The liquid crystal display device of claim 19, wherein  
5 each of said barrier lines overlaps one of said plurality of data lines.

21. The liquid crystal display device of claim 19, wherein  
each of said barrier lines overlaps one of said plurality of gate lines.

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22. The liquid crystal display device of claim 19, further comprising:

a low reflective layer formed on at least one of said plurality of data and gate lines.

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23. A method of fabricating a liquid crystal display device, comprising:

forming gate lines and at least one gate electrode connected to one of said gate lines on a substrate;

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forming an insulation layer over said substrate;

forming an active layer over said gate electrode;

forming a metal layer over said substrate;

forming barrier lines on said metal layer;

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patterning said metal layer using said barrier lines as a mask to form source and drain electrodes on said active region and to form data lines;

forming a color filter between at least two adjacent barrier lines using ink ejection; and

forming a pixel electrode connected to said drain electrode.

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24. A method of fabricating a liquid crystal display device,

comprising:

- forming a first insulation layer on a substrate;
- forming an active layer on said insulation layer;
- forming a second insulation layer over said substrate;
- 5 forming gate lines and a gate electrode, connected to one of said gate lines and disposed over said active layer, on said second insulation layer;
- forming a protective film over said substrate;
- forming source and drain electrodes, in electrical contact
- 10 with source and drain regions of said active layer, on said protective film; and
- forming barrier lines on said source and drain electrodes;
- forming a color filter between at least two adjacent barrier lines using ink ejection;
- 15 removing said barrier lines;
- forming a pixel electrode connected to said drain electrode;
- and
- forming light shielding lines over said source and drain electrodes.

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25. A method of fabricating a liquid crystal display device, comprising:

- forming a transistor structure on a substrate, said transistor structure including source and drain electrodes connected to an
- 25 active region; and
- forming barrier lines on said source and drain electrodes;
- and
- forming a color filter between at least two adjacent barrier lines using ink ejection; and
- 30 forming a pixel electrode connected to said drain electrode.

26. A method of fabricating a liquid crystal display device, comprising:

forming a plurality of barrier lines on a first substrate;  
and

5 forming a color filter between at least two adjacent barrier lines using ink ejection.